

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: SCOBIE POND	Lake Area (ha): 10.76
Town: LONDONDERRY	Maximum depth (m): 7.9
County: Rockingham	Mean depth (m): 3.6
River Basin: Merrimack	Volume (m <sup>3</sup> ): 388000
Latitude: 42°54'41" N	Relative depth: 2.1
Longitude: 71°20'39" W	Shore configuration: 1.12
Elevation (ft): 375	Areal water load (m/yr): 3.97
Shore length (m): 1300	Flushing rate (yr <sup>-1</sup> ): 1.10
Watershed area (ha): 90.6	P retention coeff.: 0.70
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

17 February 1998

18 June 1997

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 45%	ASTERIONELLA 35%
	#2	UROGLENOPSIS 40%	(NET PHYTOPLANKTON
	#3	ASTERIONELLA 10%	WAS SPARSE)
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			2.92
DOM. ZOOPLANKTON (% TOTAL)	#1	KELICOTTIA 48%	CONOCHILUS 49%
	#2	LRG RND CILIATE SPP 17%	HOLOPEDIDIUM 15%
	#3		CALANOID COPEPOD 13%
ROTIFERS/LITER		313	98
MICROCRUSTACEA/LITER		39	63
ZOOPLANKTON ABUNDANCE (#/L)		424	192
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			2.4
BOTTOM DISSOLVED OXYGEN (mg/L)		5.1	0.0
BACTERIA (E. coli, #/100 ml)	#1		1
	#2		4
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m):	2.4
Hypolimnion volume (m <sup>3</sup> ):	36750
Anoxic volume (m <sup>3</sup> ):	43500

**CHEMICAL:**

Lake: SCOBIE POND

Town: LONDONDERRY

	17 February 1998		18 June 1997		
DEPTH (m)	2.0	5.0	1.0	3.0	6.0
pH (units)	5.7	5.4	6.0	5.3	5.6
A.N.C. (Alkalinity)	2.1	1.6	2.0	1.8	4.8
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.30	0.30	0.20	0.10	0.40
TOTAL PHOSPHORUS	0.012	0.010	0.015	0.026	0.028
CONDUCTIVITY ( $\mu$ mhos/cm)	61.1	73.2	59.9	57.9	64.2
APPARENT COLOR (cpu)	29	55	45	49	125
MAGNESIUM			0.60		
CALCIUM			2.5		
SODIUM			7.7		
POTASSIUM			0.54		
CHLORIDE	11	14	12		12
SULFATE	5	6	5		4
TN : TP	25	30	13		14
CALCITE SATURATION INDEX			4.6		

All results in mg/L unless indicated otherwise

**TROPHIC CLASSIFICATION: 1997**

D.O. S.D. PLANT CHL TOTAL CLASS

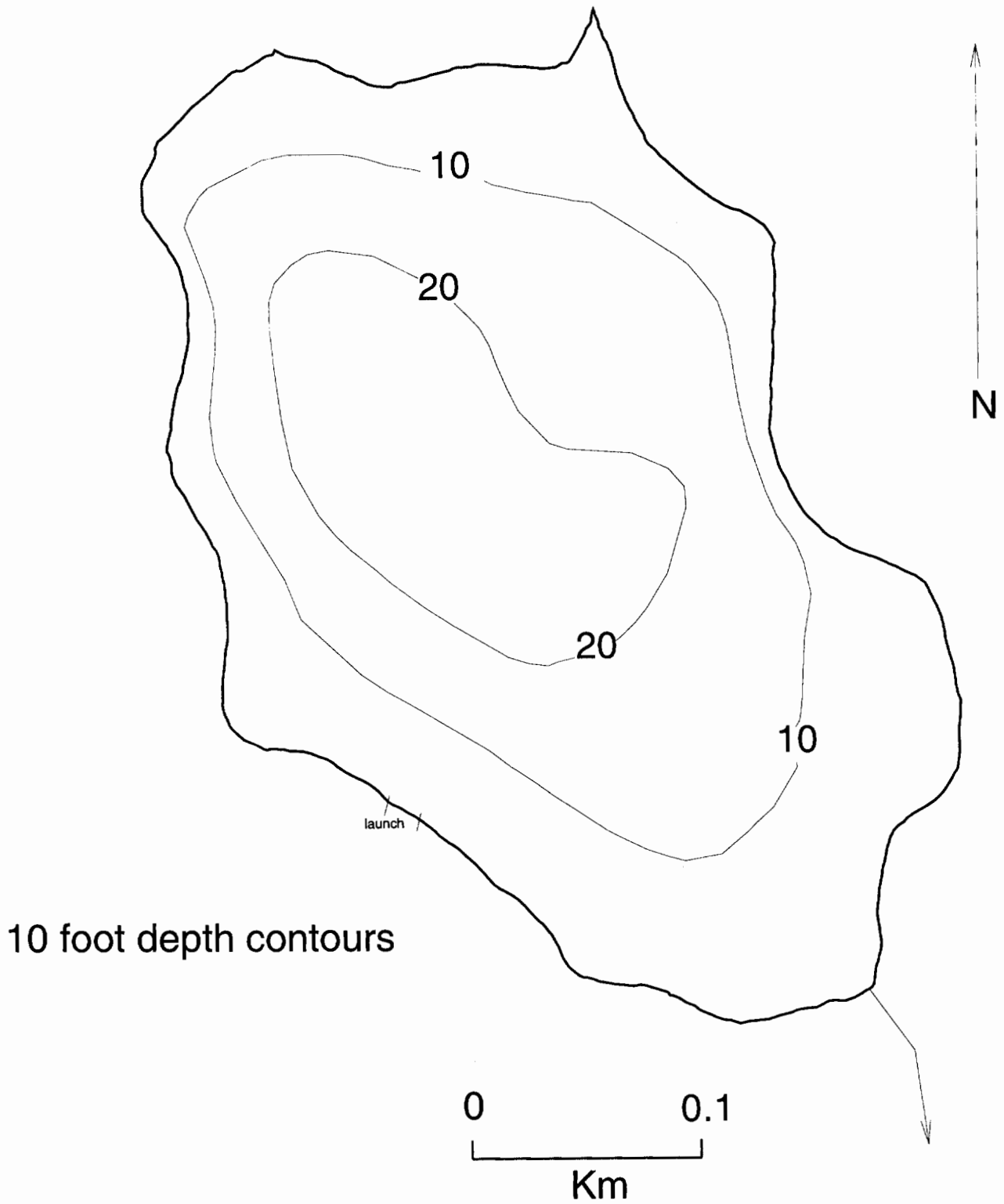
4	3	3	0	10	Meso.
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**COMMENTS:**

1. A previous trophic survey of Scobie Pond in 1979 also classified the pond as mesotrophic. The major trophic parameter change between the two dates was in bottom dissolved oxygen. Despite an earlier sampling date in 1997, no oxygen was present below 5 meters. In 1979 the D.O. was greater than 2.5 mg/L all the way to the bottom (7 meters).
2. 10 mph speed limit.
3. Boat launch site was dirt/gravel and into shallow water. Parking was available for 5 cars & trailers. Trash was all over the launch site at the time of the summer sampling.
4. This is a moderately acidic tea-colored pond.

# Scobie Pond

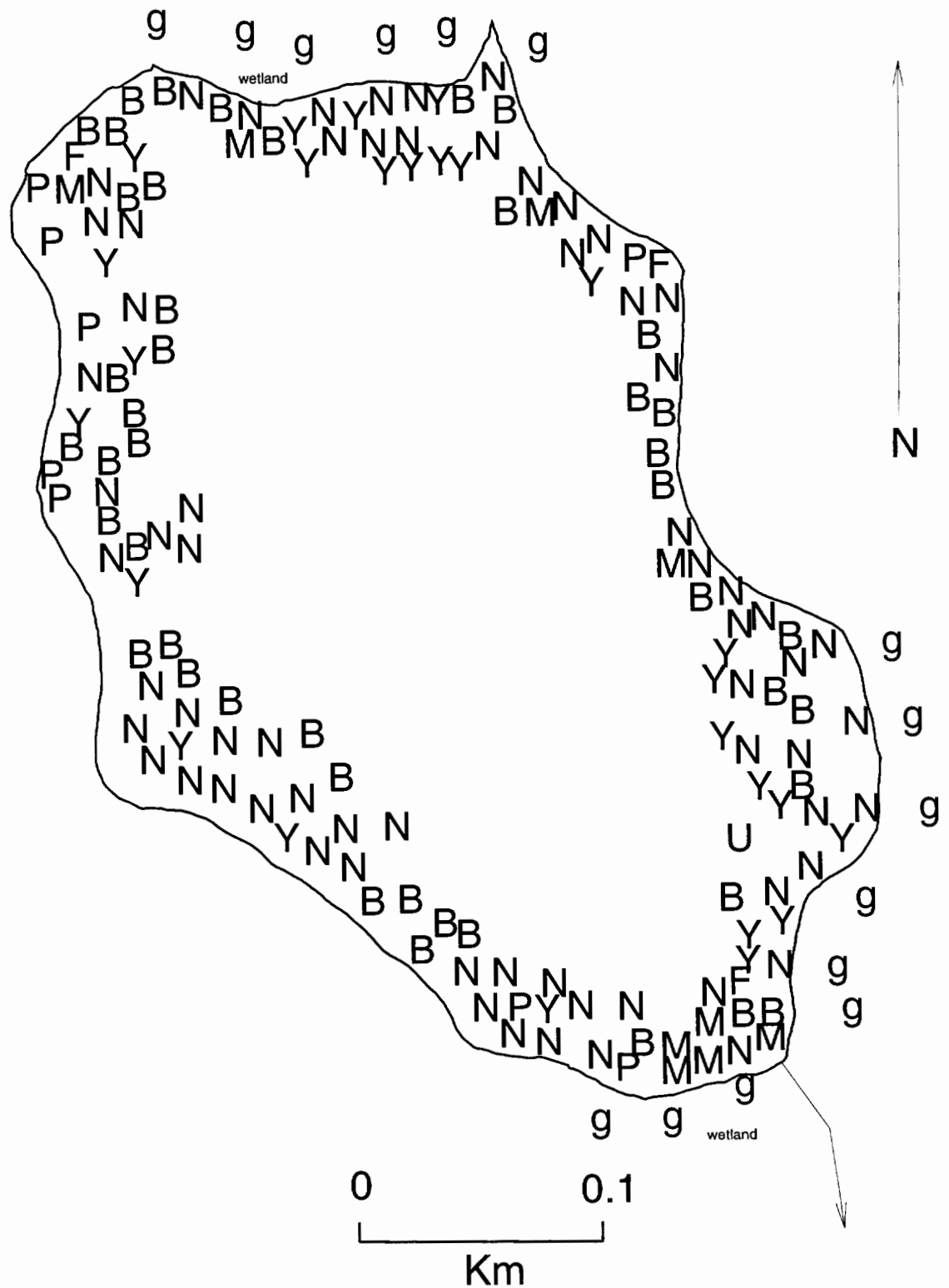
## Londonderry



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# Scobie Pond

## Londonderry



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